



AEGIS Ship Integration and Test Industry Day

21 September 2012



Agenda



- **Administration & Ground Rules**
- **AEGIS SI&T Program Overview**
- **Solicitation Overview**
- **AEGIS SI&T Program Office Requirements**
- **Closing Remarks**



Purpose



- The purpose of today's session is for the AEGIS Program Office, PEO IWS 1.0, to provide information to Industry on:
 - AEGIS Ship Integration and Test Program (SI&T)
 - AEGIS SI&T Solicitation Statement of Work (SOW) and Requirements (notional)
- Collect questions from Industry
- IMPORTANT NOTE - Today's Industry Day is provided for information and planning purposes only. The formal solicitation released via NECO and FedBizOpps will

No Questions Will Be Answered Today



Administrative Announcements



- **Briefing is UNCLASSIFIED**
- **No recording devices or cameras**
- **Turn cell phones off**
- **Please wait to be escorted out at conclusion of event if you are not badged**
- **All questions may be answered at the governments discretion**



Ground Rules



- This briefing will not cover:
 - Combat System Engineering Agent (CSEA)
 - Production requirements
 - FMS requirements
- Today's discussion topic is the PEO IWS 1.0 AEGIS SI&T competition only
- Government will not respond to questions today
 - Responses to all written questions received today will be posted to NECO and FedBizOpps to the maximum extent practicable
- POC for all questions is Mr. Brendan O'Mara, Contracting Officer
 - brendan.o'mara@navy.mil

Please Do Not Contact The Program Office!

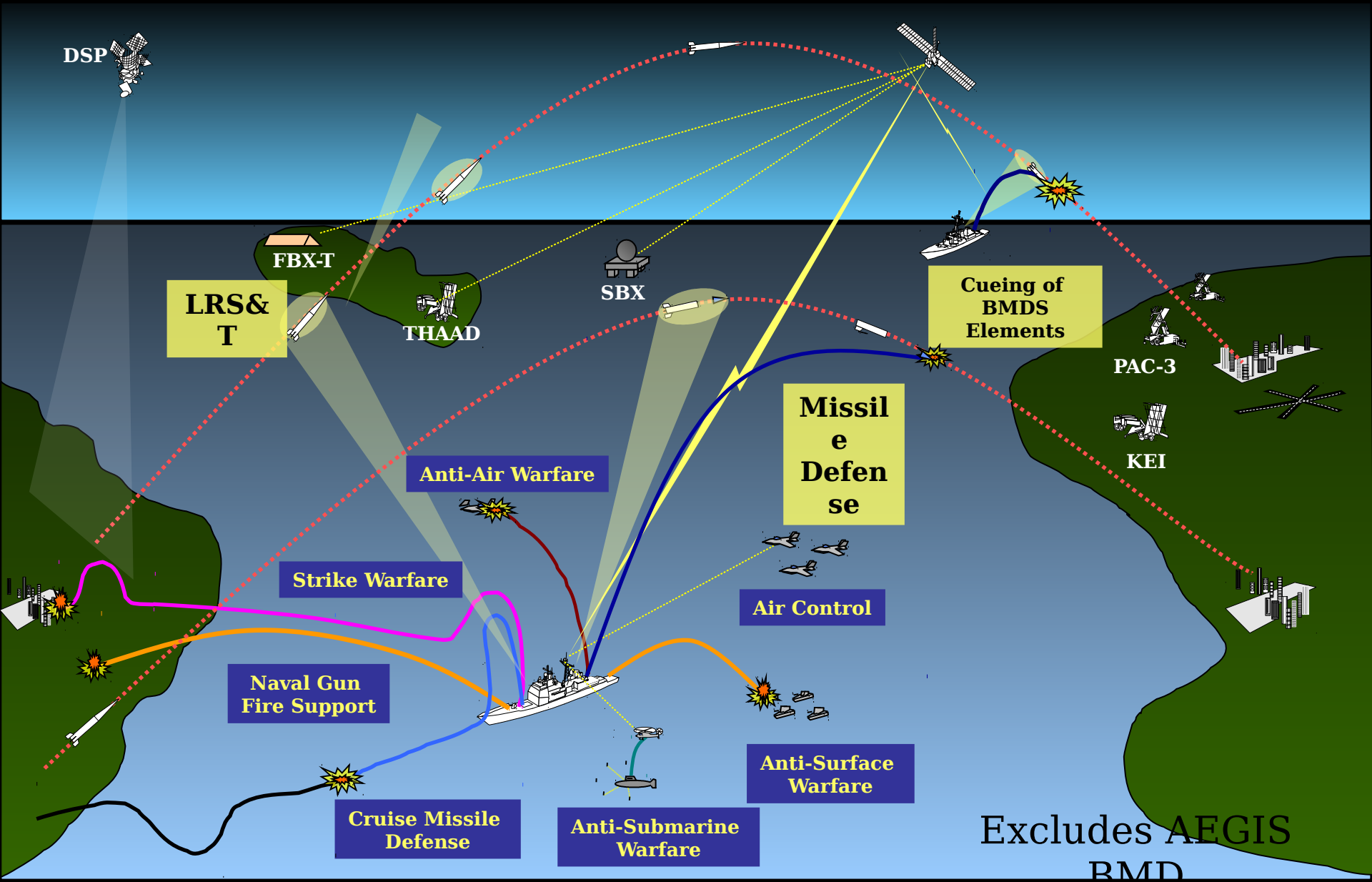


SI&T Program Overview

**William
McLaughlin
PEO IWS 1B**



AEGIS OV-1: Multi-Mission Operations





PEO IWS 1B - Who we are



■ Ship Integration is:

- ...the management of the physical design, integration, test, and maintenance, from concept development throughout a ship's lifecycle of warfare systems and ship's systems to build and maintain war ready ships

■ Mission:

- We are the central focus for AEGIS Combat System (ACS) ship integration for the purpose of delivering and maintaining mission ready ships

■ Vision:

- We are the established provider of superior leadership as the ACS ship integration manager for all AEGIS Cruisers and Destroyers



Combat System Ship Integration & Test Products and Services



◀ New Construction ▶ ▶ In Service ▶

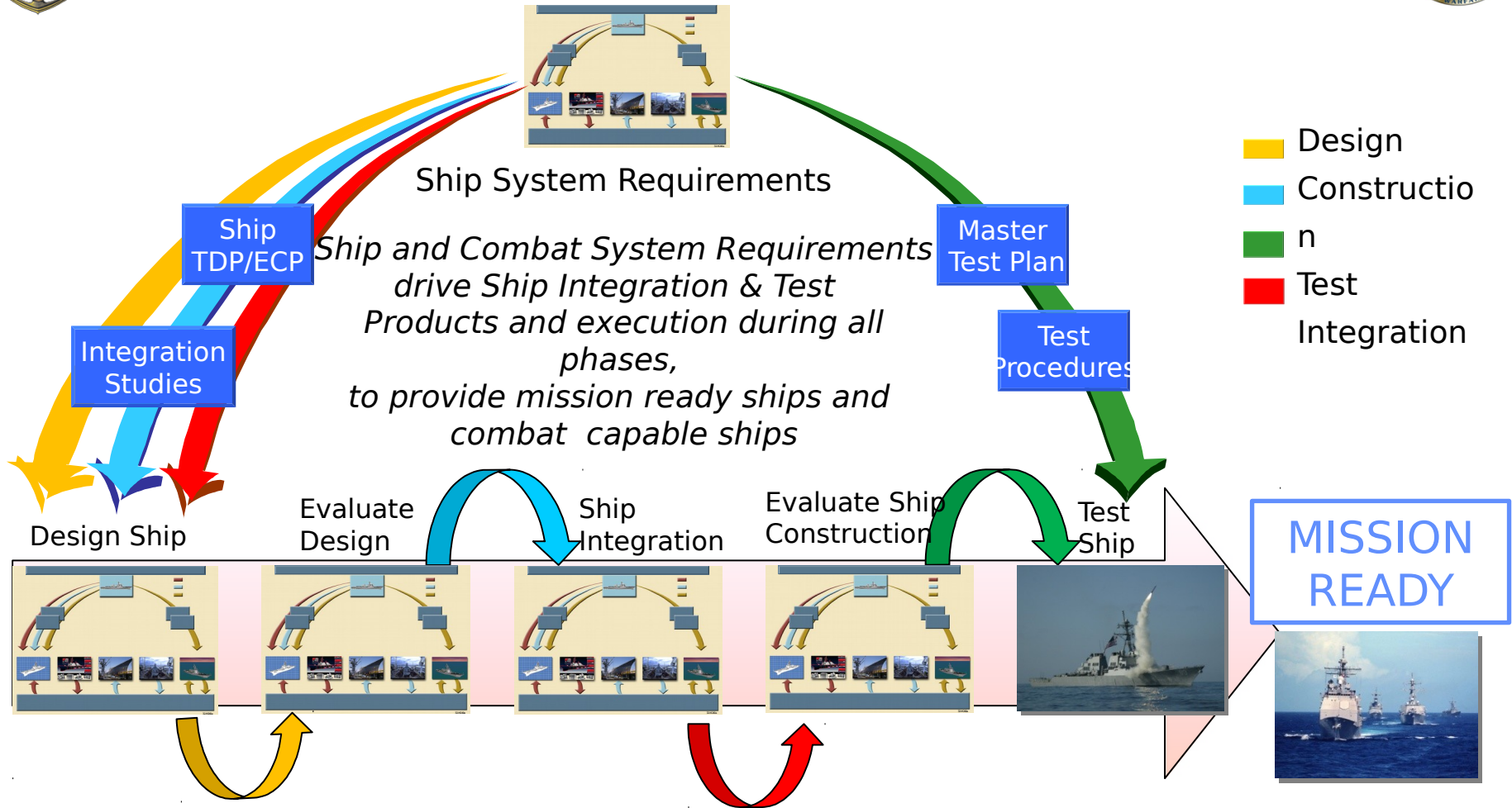


Concept and Preliminary Design	Detail Design and Construction	Shipyard Test and Trials	Post Delivery Test and Trials	Post Shakedown Availability	Availability Planning	Availability Execution
<ul style="list-style-type: none"> System Level Design Shipbuilding RFP Inputs <ul style="list-style-type: none"> Preliminary Arrangements, HSI Preliminary Cable Blocks Power/Cooling Design Ship Impact Statement Ship Spec /Constraints Topside Impacts DBET Turnkey 	<ul style="list-style-type: none"> Final Documentation under Configuration control Topside, EMC/ EMX analysis Issue CRS Power, Cooling at Compartment level Implement Test Program Develop Test Procedures Fire Control Cut-outs Waterfront Engineering Review Ship ECP, feedback Computer Program Testing Develop CSAM, C&L, OCSOT, CSID & STOM 	<ul style="list-style-type: none"> Waterfront Testing, Data Analysis At Sea Trials Trial Card Resolution CSAV Final CP Integration Develop CSOSS Review ILS Crew Familiarization Tech Support for WSESRB Cert T&E Engineering Planning PDA WP Planning & Execution Combat System Configuration Management Verify Fire Control Cutouts Sailaway Readiness Review 	<ul style="list-style-type: none"> Plan execute Shock, LFT&E Events CSSQT Support DT/OT Support PSA WP Planning FCT, PSA Test Package Development Assist Ships Force/Program Office in Conducting FCT Interoperability (Strike Configuration Planning) 	<ul style="list-style-type: none"> FCT Trial Card Resolution Execute PSA <ul style="list-style-type: none"> Logistics Support Test Coordination CS Project Engineer SI&T LSEA Rep Log Rep Interoperability (Strike Configuration Planning) Conduct SCN/FMP Turnover 	<ul style="list-style-type: none"> TDP Development SHIPMAIN SCD Review Resolve Design Issues Develop PCB Input to Advance Planning Letter Input to Authorization Letter Review Topside EMC/EMX Analysis Integrated Scheduling & Test Products Schedule CSD 	<ul style="list-style-type: none"> On-site Execution <ul style="list-style-type: none"> Mobile Test Team CS Project Engineer SI&T LSEA Rep Log Rep Test Coordinator Post Avail Document Update Maintain C5I Configuration Control Drawing Waterfront LAR Evaluate & Resolve Perform CSD installation

Fully Integrated Mission Ready Ship Delivered



Ship Integration and Test



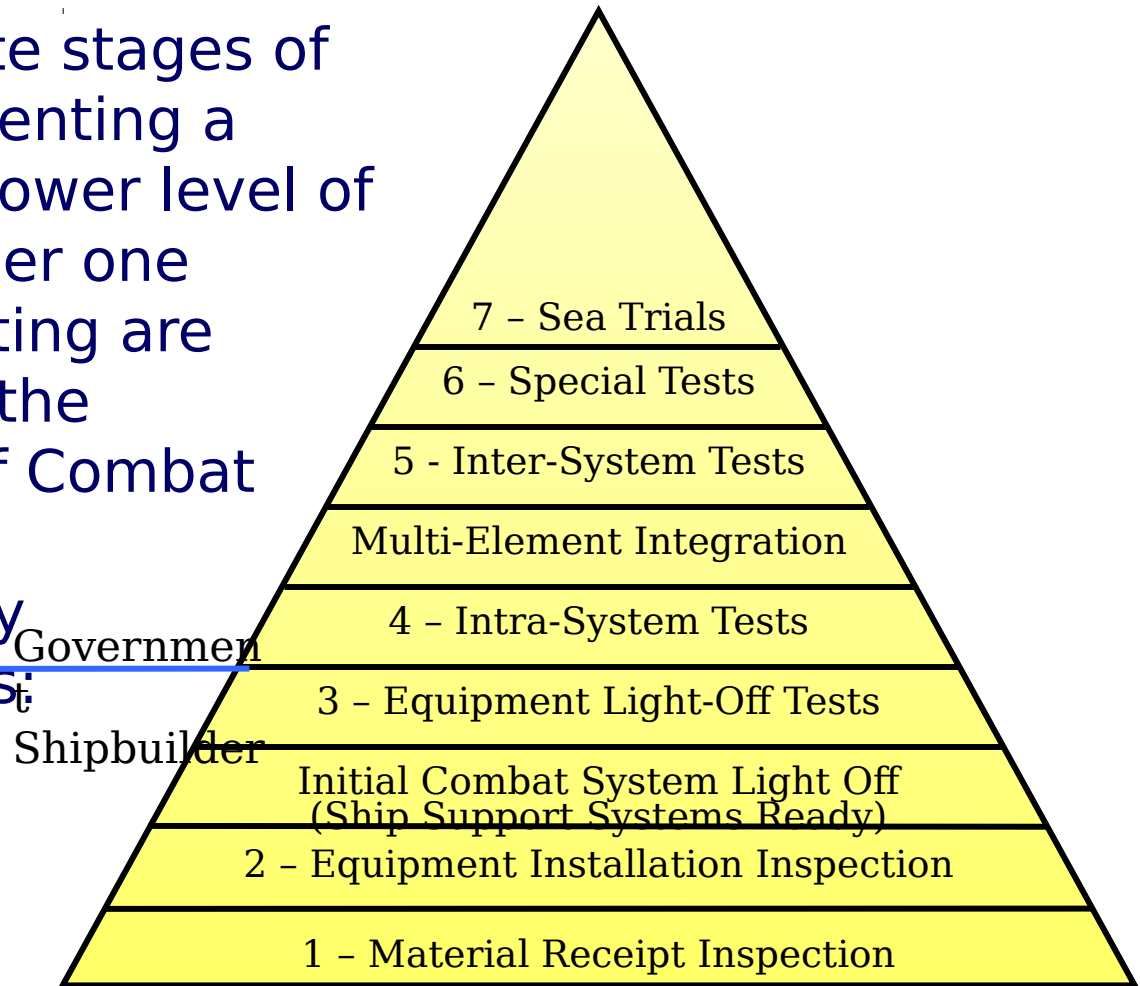
We Deliver Complete & Maintain War Ready Ships for Fleet Operations



Bottom-up Test Philosophy



- Divided into separate stages of testing, each representing a progression from a lower level of operability to a higher one
- Seven stages of testing are commonly used for the Shipboard Testing of Combat Systems
- Shared responsibility for conducting Tests:



Structured Process for Integrated Testing of Complex Shipboard Combat System ensures validation of System Requirements



Solicitation Overview

**Brendan O'Mara
Procuring Contracting
Officer (PCO)**



Notional Solicitation Information



■ Approach

- **Full and Open Competition (see FAR 6.1)**

■ Contract Types

- **Cost-Plus-Incentive-Fee (CPIF) completion-type with Specified Performance Incentives**
 - **New construction Test Team Execution**
 - **AMOD Test Team Execution**
 - **AWS Assessments**
- **Cost-Plus-Award-Fee (CPAF) Level-of-effort (LOE) with Technical Instructions**
 - **SI&T Overall Management/Support**
 - **SCN/AMOD/Post-Delivery/CSSQT Support**
 - **SI&T Engineering (includes TDP development)**

■ Period of Performance (Potential total of ten (10) years)



Notional Section B Structure



CLIN	CLIN Type	CLIN Description	Year Range									
			Base Year	Option One	Option Two	Option Three	Option Four	Option Five	Option Six	Option Seven	Option Eight	Option Nine
			12/13 - 12/14	12/14 - 12/15	12/15 - 12/16	12/16 - 12/17	12/17 - 12/18	12/18 - 12/19	12/19 - 12/20	12/20 - 12/21	12/21 - 12/22	12/22 - 12/23
0001	CPAF LOE	Program Mngt	0001AA	1001BA	2001CA	3001DA	4001EA	5001FA	6001GA	7001HA	8001JA	9001KA
0002	CPAF LOE	SCN Support Activities	0002AA	1002BA	2002CA	3002DA	4002EA	5002FA	6002GA	7002HA	8002JA	9002KA
0003	CPIF	ACB16/TI16 New Construction Test Team- One Ship	Reserved	Reserved	Reserved	Reserved	4003	5003	6003	7003	8003	9003
0004	CPIF	ACB16/TI16 New Construction Test Team- One Ship	Reserved	Reserved	Reserved	Reserved	4004	5004	6004	7004	8004	9004
0005	CPIF	Future ACB/Future TI New Construction Test Team- One Ship	Reserved	Reserved	Reserved	Reserved	4005	5005	6005	7005	8005	9005
0006	CPIF	Future ACB/Future TI New Construction Test Team- One Ship	Reserved	Reserved	Reserved	Reserved	Reserved	Reserved	6006	7006	8006	9006
0007	CPAF LOE	In-Service SI&T	0007AA	1007BA	2007CA	3007DA	4007EA	5007FA	6007GA	7007HA	8007JA	9007KA
0008	CPAF LOE	Post Delivery Support	0008AA	1008BA	2008CA	3008DA	4008EA	5008FA	6008GA	7008HA	8008JA	9008KA
0009	CPAF LOE	AMOD Support Activities	0009AA	1009BA	2009CA	3009DA	4009EA	5009FA	6009GA	7009HA	8009JA	9009KA
0010	CPIF	ACB16/TI16 AMOD Test Team- One Ship	Reserved	Reserved	Reserved	Reserved	Reserved	5010	6010	7010	8010	9010
0011	CPIF	ACB16/TI16 AMOD Test Team- One Ship	Reserved	Reserved	Reserved	Reserved	Reserved	5011	6011	7011	8011	9011
0012	CPIF	ACB16/TI16 AMOD Test Team- One Ship	Reserved	Reserved	Reserved	Reserved	Reserved	5012	6012	7012	8012	9012
0013	CPAF LOE	CSSQT	0013AA	1013BA	2013CA	3013DA	4013EA	5013FA	6013GA	7013HA	8013JA	9013KA
0014	CPIF	AWS Element Assessments	0014	1014	2014	3014	4014	5014	6014	7014	8014	9014
0015	CPAF LOE	Ship Integration and Engineering	0015AA	1015BA	2015CA	3015DA	4015EA	5015FA	6015GA	7015HA	8015JA	9015KA
0016	Cost Only	ODCs & Incidental Matls	0016AA	1016BA	2016CA	3016DA	4016EA	5016FA	6016GA	7016HA	8016JA	9016KA
0017	IF	CLIN 0003 Performance Incentive	Reserved	Reserved	Reserved	Reserved	4017	5017	6017	7017	8017	9017
0018	IF	CLIN 0004 Performance Incentive	Reserved	Reserved	Reserved	Reserved	4018	5018	6018	7018	8018	9018
0019	IF	CLIN 0005 Performance Incentive	Reserved	Reserved	Reserved	Reserved	4019	5019	6019	7019	8019	9019
0020	IF	CLIN 0006 Performance Incentive	Reserved	Reserved	Reserved	Reserved	Reserved	Reserved	6020	7020	8020	9020
0021	IF	CLIN 0010 Performance Incentive	Reserved	Reserved	Reserved	Reserved	Reserved	5021	6021	7021	8021	9021
0022	IF	CLIN 0011 Performance Incentive	Reserved	Reserved	Reserved	Reserved	Reserved	5022	6022	7022	8022	9022
0023	IF	CLIN 0012 Performance Incentive	Reserved	Reserved	Reserved	Reserved	Reserved	5023	6023	7023	8023	9023
0024	IF	CLIN 0014 Performance Incentive	0024	1024	2024	3024	4024	5024	6024	7024	8024	9024
0025	NSP	Data for 0001-9024	0025									

The government will not exercise all CLINS beginning in year one.



Notional SI&T Contract Award Schedule



Industry Day

Today

Issuance of Solicitation

1st Qtr FY13

Proposal Submission Deadline

2nd Qtr FY13

Award Contract

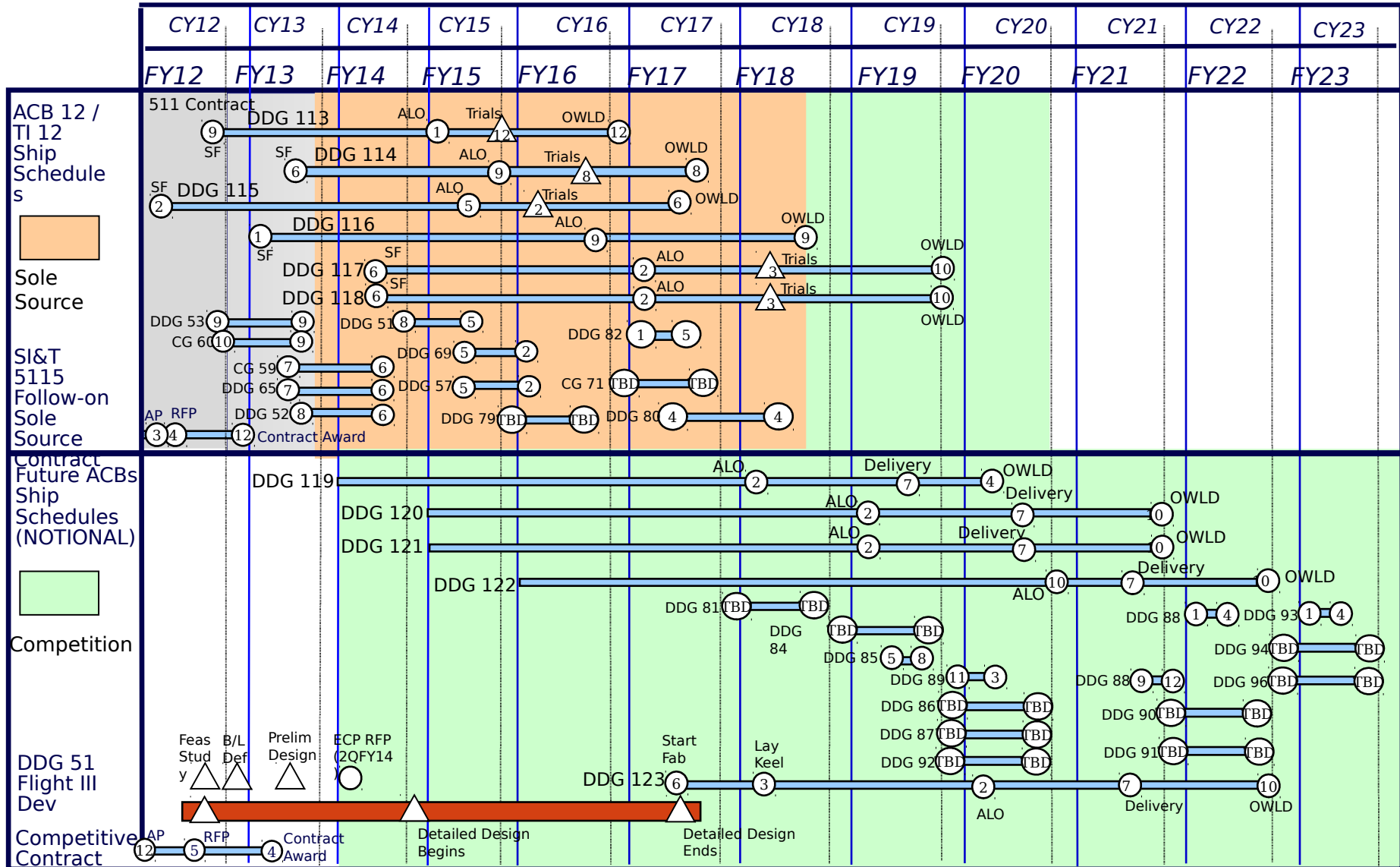
1st Qtr FY14

**All Dates Subject to Change at Government
Discretion**



SI&T Requirements

**William
McLaughlin
PEO IWS 1B**





Expected Contractor Capabilities



■ Knowledge

- U.S. surface combatant platforms and associated war-fighting, operations characteristics and capabilities for platforms
- Understanding of modern U.S. Navy shipbuilding and ship system integration requirements
- In depth knowledge of AEGIS or comparable Integrated Combat Systems
- Major ship acquisition programs including Life-Cycle Management
- Knowledge and experience in ship testing stages 1-7
- Environmental Qualification Testing
- Topside Engineering to include EMI, RADHAZ and P&FCO analysis
- Physical modeling of ship systems and Combat Systems arrangements
- Ship Construction
- General Specifications
- Ship Specifications
- Cable Qualifications, including termination and placement
- Human Systems Interface Integration
- Combat System Documentation such as CSOSS



Other Requirements



■ Security Requirements

- All Contractor personnel shall possess a SECRET-level clearance

■ Staffing

- Contractor shall ramp-up immediately upon contract award
- Fully functioning within ninety (90) days

■ Conference Space

- Contractor shall provide on-site (within ½ mile radius from Washington Navy Yard) Classified and Unclassified conference facilities



Other Requirements, cont.



■ Place of Performance

● National Capital Region

□ Washington Navy Yard & Contractor Facilities

● Pascagoula, MS

● Bath, ME

● Mayport, FL

● Everett, WA

● San Diego, CA

● Norfolk, VA

● Yokosuka, Japan

● Rota, Spain

● Pearl Harbor, HI

● Pacific Missile Range Facility (PMRF), HI

● Other Navy ports of call as directed



Draft Statement of Work



- **IWS 1.0 requires a well-integrated and coordinated Contractor team to assist the Program Office in executing its responsibility to satisfy current and future Navy and Joint needs for AEGIS SI&T.**
- **Engineering support is required in the following areas:**
 - **New Construction Combat System Waterfront Integration & Test**
 - **In-Service Ship Integration & Test**
 - **Post Delivery Support**
 - **Modernization Waterfront Integration & Test Support**
 - **CSSQT Support**
 - **AEGIS Weapon System (AWS) Element Assessments**
 - **Ship Integration & Engineering**



Draft Statement of Work - CLIN ~~0001 CPAF~~



■ CLIN 0001: Program Management/Support

● *IMS*

- Develop and maintain an Integrated Master Schedule (IMS) for program control, status monitoring and reporting purposes.

● *Subcontractor/Supplier Management*

- Institute appropriate management actions relative to subcontractor/supplier performance.

● *Data Management*

- Maintain a data access library to document all aspects of the program.

● *Business and Financial Management*

- Earned Value Management System (EVMS).
- Conduct an Integrated Baseline Review (IBR) within 90 calendar days after Contract Award.
- Provide Contractor Performance Reports (CPRs).



Draft Statement of Work - CLIN

~~0002 CPAF~~



■ CLIN 0002: New Construction Combat System Waterfront Integration And Test Support Activities

● *Liaison Support Activities*

- Act as the liaison between the Program Office and the shipyard, crew and SUPSHIP

● *Advance Planning Activities*

- Review test resources, documentation, and test procedures.
- Perform installation site surveys and ship checks prior to installation activities

● *Combat System Engineering And Test Execution Closeout*

- Analysis of collected data, completion reports, lessons learned and outstanding discrepancies.
- Document discrepancies and coordinate resolution with the CSEA.

● *New Construction Test Team Training*

- Provide training to develop the requisite skills to



Draft Statement of Work - CLINs 0003-6 CPIE



- **CLIN 0003, 0004, 0005 and 0006: New Construction Combat System Waterfront Integration And Test**
 - *Combat System Engineering And Test Execution*
 - New construction waterfront test and engineering for the execution of the AEGIS New Construction Combat System Test Program for the DDG 51 class ships.



Draft Statement of Work - CLIN ~~0007 CPAF~~



■ CLIN 0007: In-service Ship Integration And Test

- *Engineering and technical support for the AEGIS in-service ships*
 - Will fully transition in FY 17/18.



Draft Statement of Work - CLIN 0008 CPAF



■ CLIN 0008: Post Delivery Support

- *On-site (ship and shore) Post Delivery Test & Trial (PDT&T) Support*
 - PDT&T Support during the period of time between delivery of the ship from the shipyard and the end of the Ship Construction, Navy (SCN) envelope or Obligation Work Limiting Date (OWLD). Tasks include:
 - Combat System Ship Qualification Trials (CSSQT), Developmental Testing and/or special testing such as demonstration and qualification-type tests
 - Combat Systems modifications
 - Final Contract Trial (FCT) operations support and planning
 - Post Delivery Availability (PSA) operations and conduct



Draft Statement of Work - CLIN

~~0009 CPAF~~



■ CLIN 0009: Modernization Waterfront Integration Test Support

- *Combat System Engineering Agent Liaison Activities*
- *Pre-Availability Advance Planning Activities*
 - Review test resources, documentation, and test procedures.
- *Post Availability Closeout Activities*
 - Analysis of collected data, completion reports, lessons learned and outstanding discrepancies.



Draft Statement of Work - CLINs 0010-12 CPIF



■ CLIN 0010, 0011, 0012: ACB-16/TI-16 AEGIS Modernization Test Execution

- *Combat System Engineering And Test Execution During Availability Test Periods*
 - Waterfront test and engineering for combat system test activities during modernization availabilities.
 - Provide assistance to the Government in validation that the combat system and its component elements are correctly installed, fully functional, and operate as an integrated warfare system. This effort is planned to occur during a post AEGIS Light Off (ALO) test period and result in a fully functional and fully tested shipboard Combat System ready to be turned over to the Fleet for operation.



Draft Statement of Work - CLIN 0013

CPAF



■ CLIN 0013: CSSQT Support

- *Combat System Ship Qualification Trials (CSSQT) and Developmental Test (DT) Support*
 - Support during planning and execution phases for AEGIS New Construction Destroyers and In-Service Aegis Cruisers and Destroyers following Modernization/Upgrade/Overhaul and during In-Service DT/Technical Evaluations.



Draft Statement of Work - CLIN

~~0014 CPM~~



■ CLIN 0014: Aegis Weapon System (AWS) Element Assessments

- *Management, engineering, and test effort to perform assessments on AEGIS CG-47 and DDG-51 Class ships in accordance with Integrated Class Maintenance Plan (ICMP) requirements maintained by Surface Maintenance Engineering Planning Program (SURFMEPP).*
 - Assessments occur pre- and post-CNO Ship Maintenance Availability.
 - Assessments to include:
 - Computer/Mission Critical Enclosure (MCE)
 - Displays
 - Fire Control System (FCS)
 - Operational Readiness Test System (ORTS)
 - SPY Transmitter
 - SPY Signal Processor (SIGPRO)
 - AEGIS Local Area Network (LAN) Interconnection System (ALIS)
 - Peripherals
 - Electronic Cooling Water System (ECWS)
 - 400 Hz



Draft Statement of Work - CLIN 0015

CPAF



■ CLIN 0015: Ship Integration And Engineering

- *Technical Data Packages (TDPs), Shipboard Integrations*
- *Rough Order Of Magnitude (ROM) Level Engineering Packages (RLEP)*
- *Technical Documentation*
- *Test Package And Test Procedure Development*
- *Configuration Definition Documents (CDDs)*
- *Feasibility Studies*
- *Configuration Management Support*
- *Lifecycle Engineering*
- *System Engineering*
- *Environmental Qualification Testing (EQTs)*
- *Topside Analysis*
- *BMD Engineering Analysis*
- *Combat System Alignment*
- *Sonar Self-Noise*



Draft Statement of Work - CLIN

0016



■ **CLIN 0016: ODCs & Incidental Materials (Cost Only)**

- *Other Direct Costs (ODCs) in support of all CLINs/SLINs*
- *Incidental Materials in support of all CPAF LOE CLINs/SLINs*



Closing Remarks



- Please pass any questions you have recorded during this session to the end of the row for collection, or drop in box on way out
- A copy of today's briefing and responses to questions will be posted to NECO and FedBizOpps
- Estimated Issuance of Final Solicitation: 1st Qtr FY13

Thank You for Attending and for Your Interest in AEGIS